

REMARKS

In the April 7, 2009 Office Action, claims 2, 3, 6-8, 10-12, 14-16, 21 and 22 stand rejected in view of prior art. No other objections or rejections were made in the Office Action.

Status of Claims and Amendments

In response to the April 7, 2009 Office Action, Applicants have amended independent claims 2, 10 and 14 as indicated above. Applicants wish to thank the Examiner for the thorough examination of this application. Thus, claims 2, 3, 6-8, 10-12, 14-16, 21 and 22 are pending, with claims 2, 10 and 14 being the only independent claims. Reexamination and reconsideration of the pending claims are respectfully requested in view of above amendments and the following comments.

Rejections - 35 U.S.C. § 103

In paragraph 2 of the Office Action, claims 2, 3, 6-8, 10-12, 14-16, 21 and 22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,415,603 to Nowka et al. (hereinafter "Nowka et al. patent") in view of U.S. Patent No. 5,232,989 to Hamada et al. (hereinafter "Hamada et al. patent"). In response, Applicants have amended independent claims 2, 10 and 14 as mentioned above.

More specifically, independent claims 2, 10 and 14 now clearly recite that the intermediate component is *free of direct connections* to the body of the vehicle between the upstream and downstream flexible couplings such that the intermediate component freely floats between the upstream and downstream flexible couplings with respect to the body of the vehicle, *the intermediate component includes a catalyst*, and that a dynamic damper is formed *between the upstream component and the downstream component* by virtue of the elastic characteristics and the mass, with the elastic characteristics of the flexible couplings

being selected to optimize the resonant frequency of the dynamic damper *with respect to the mass of the intermediate component*. Independent claim 14 now clearly recites that the intermediate component is *free of direct connections* to the body of the vehicle between the upstream and downstream flexible couplings such that the intermediate component freely floats between the upstream and downstream flexible couplings with respect to the body of the vehicle, *the intermediate component includes a catalyst*, and that the elastic characteristics of the flexible couplings is selected to optimize the resonant frequency of the vibration system *with respect to the mass of the intermediate component*, with the vibration system being formed of the couplings and the intermediate component *between the upstream component and the downstream component*. Clearly this arrangement is *not* disclosed or suggested by the Nowka et al. patent, Hamada et al. patent or any other prior art of record.

1. TEACHINGS OF THE NOWKA ET AL. PATENT AND THE HAMADA ET AL. PATENT DO NOT PROVIDE A SUFFICIENT BASIS FOR A REASONABLE EXPECTATION OF SUCCESS.

The Nowka et al. patent is *absolutely silent about* a dynamic damper. Specifically, referring to Figures 1 and 2 of the Nowka et al. patent, the Nowka et al. patent merely discloses the joints 30, 32¹ and the middle portion 34 disposed between and connected to the joints 30, 32. However, the Nowka et al. patent does *not* explicitly disclose a dynamic damper formed by virtue of the elastic characteristics of the joints 30, 32 and the mass 34. Furthermore, the Nowka et al. patent *fails to* show the elastic characteristics of the joints 30, 32 being selected to optimize the resonant frequency of the dynamic damper, as acknowledged on page 3 of the Office Action.

On the other hand, referring to Figures 1 and 2 of the Hamada et al. patent, the

¹ Drawings of the Nowka et al. patent do not have a reference numeral "32". However, Applicants respectfully believe that the right side joint 30 located closer to the muffler 54 should be the second joint 32, and that the left side joint 30 located closer to the pipe 28 should be the first joint 30.

Hamada et al. patent merely teaches the exhaust pipe for motor vehicle comprising the flexible joints 20, 22, as acknowledged on page 3 of the Office Action. Furthermore, referring to col. 4, lines 22-25 of the Hamada et al. patent, the Hamada et al. patent merely teaches the auxiliary vibration system consisting of the rear portion 34, the muffler supports 40, 42 and the flexible joint 22.

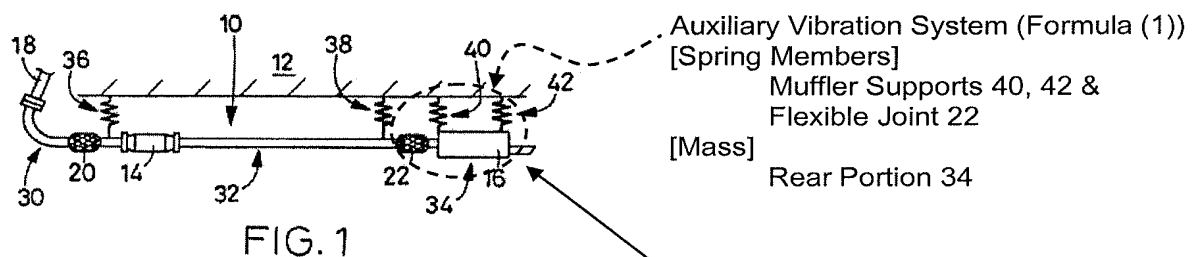


FIG. 1
Annotated Figure 1 of Hamada et al. patent

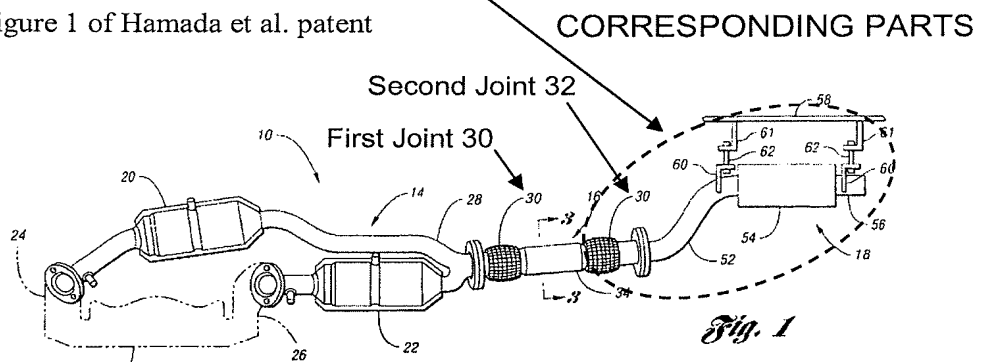


Fig. 1
Annotated Figure 1 of Nowka et al. patent

A comparison of the parts of the Nowka et al. patent and the Hamada et al. patent is as follows:

The Nowka et al. patent

Brackets 61 & Isolators 62
Muffler 54
Second Joint 32
None
Middle Portion 34
None
First Joint 30
Pipe 28

The Hamada et al. patent

Muffler Supports 40, 42	Auxiliary Vibration System of Hamada et al. patent
Main Muffler 16 / Rear Section 34	
Flexible Joint 22	
Muffler Support 38	
Intermediate Portion 32	
Muffler Support 36	
Flexible Joint 20	
Front Section 30	

On page 5 of the Office Action, the Office Action concludes that it is obvious for one of ordinary skill in the art to replace the brackets 61 and the isolators 62 of the Nowka et al. patent with the muffler supports 40, 42 of the Hamada et al. patent for reducing vibrations of the vehicle body. However, Applicants respectfully asserts that the teachings of the Nowka et al. patent and the Hamada et al. patent do **not** provide a sufficient basis for a reasonable expectation of success, and **fail to** establish a *prima facie* case of obviousness.

In particular, the Hamada et al. patent merely teaches the auxiliary vibration system consisting of the rear portion 34, the muffler supports 40, 42 and the flexible joint 22 as mentioned above. Therefore, even if one of ordinary skill in the art would merely replace the brackets 61 and the isolators 62 of the Nowka et al. patent with the muffler supports 40, 42 of the Hamada et al. patent, the modification of the Nowka et al. patent would merely include an auxiliary vibration system consisting of the muffler 54 of the Nowka et al. patent (corresponding to the rear portion 34 of the Hamada et al. patent) as a mass, and the brackets 61, the isolators 62 and the second joint 32 of the Nowka et al. patent (corresponding to the muffler supports 40, 42 and the flexible joint 22 of the Hamada et al. patent) as spring members. Moreover, if one of ordinary skill in the art would modify the Nowka et al. patent to include this auxiliary vibration system, then the natural frequency of this auxiliary vibration system would be made substantially equal to 10-30 Hz, as taught in col. 4, lines 5-50 of the Hamada et al. patent.

However, the support structure (e.g., the brackets 61 and the isolators 62) of the exhaust system 10 of the Nowka et al. patent with respect to the vehicle body of the Nowka et al. patent is **completely different** from the support structure (e.g., the muffler supports 36, 38, 40 and 42) of the exhaust pipe 10 of the Hamada et al. patent with respect to the vehicle body 12 of the Hamada et al. patent. Accordingly, even if one of ordinary skill in the art would set

the natural frequency of this auxiliary vibration system consisting of the muffler 54, the brackets 61, the isolators 62 and the second joint 32 of the Nowka et al. patent to 10-30 Hz, the teachings of the Nowka et al. patent and the Hamada et al. patent do **not** provide how the different support structure of the exhaust system 10 of the Nowka et al. patent affects the vibrations of the vehicle body of the Nowka et al. patent.

Accordingly, the teachings of the Nowka et al. patent and the Hamada et al. patent do **not** provide a sufficient basis for a reasonable expectation of success for reducing vibrations of the vehicle body, and **fail to** establish a *prima facie* case of obviousness.

2. THE COMBINATION OF THE NOWKA ET AL. PATENT WITH THE HAMADA ET AL. PATENT TEACHES AWAY FROM HAVING THE INTERMEDIATE COMPONENT THAT IS FREE OF DIRECT CONNECTIONS TO THE BODY OF THE VEHICLE BETWEEN THE UPSTREAM AND DOWNSTREAM FLEXIBLE COUPLINGS

Furthermore, even if one of ordinary skill in the art would combine the Nowka et al. patent and the Hamada et al. patent, one of ordinary skill in the art would **not** combine the Nowka et al. patent and the Hamada et al. patent in a manner acknowledged in the Office Action. Rather, one of ordinary skill in the art would modify the support structure of the exhaust system 10 of the Nowka et al. patent to include all of the muffler supports 36, 38, 40 and 42 of the Hamada et al. patent in order to reduce the vibrations of the vehicle body as taught in the Hamada et al. patent. In other words, the combination of the Nowka et al. patent and the Hamada et al. patent **requires** the muffler supports 36, 38, 40 and 42 of the Hamada et al. patent for reducing vibrations of the vehicle body as taught in the Hamada et al. patent. More specifically, the combination of the Nowka et al. patent and the Hamada et al. patent **requires** the muffler supports 36 and 38 of the Hamada et al. patent that are disposed between the middle portion 34 of the Nowka et al. patent and the first and second joints 30 and 32 of the Nowka et al. patent, respectively.

Accordingly, the combination of the Nowka et al. patent with the Hamada et al. patent *teaches away* from having the intermediate component that is free of direct connections to the body of the vehicle between the upstream and downstream flexible couplings, as recited in independent claims 2, 10 and 14.

Under U.S. patent law, the mere fact that the prior art can be modified does *not* make the modification obvious, unless an *apparent reason* exists based on evidence in the record or scientific reasoning for one of ordinary skill in the art to make the modification. See, KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1741 (2007). The KSR Court noted that obviousness cannot be proven merely by showing that the elements of a claimed device were known in the prior art; it must be shown that those of ordinary skill in the art would have had some "apparent reason to combine the known elements in the fashion claimed." Id. at 1741. The current record lacks any apparent reason, suggestion or expectation of success for combining the patents to create Applicants' unique arrangement of an engine exhaust system for a vehicle.

Therefore, Applicants respectfully request that this rejection be withdrawn in view of the above comments and amendments.

Moreover, Applicants believe that dependent claims 3, 6-8, 11, 12, 15, 16, 21 and 22 are also allowable over the prior art of record in that they depend from independent claims 2, 10 and 14, and therefore are allowable for the reasons stated above. Also, dependent claims 3, 6-8, 11, 12, 15, 16, 21 and 22 are further allowable because they include additional limitations. Thus, Applicants believe that since the prior art of record does not disclose or suggest the invention as set forth in independent claims 2, 10 and 14, the prior art of record also fails to disclose or suggest the inventions as set forth in dependent claims 3, 6-8, 11, 12, 15, 16, 21 and 22.

Appl. No. 10/565,394
Amendment dated June 30, 2009
Reply to Office Action of April 7, 2009

Therefore, Applicants respectfully request that this rejection be withdrawn in view of the above comments and amendments.

Conclusion

In view of the foregoing amendment and comments, Applicants respectfully assert that claims 2, 3, 6-8, 10-12, 14-16, 21 and 22 are now in condition for allowance.

Reexamination and reconsideration of the pending claims are respectfully requested.

Respectfully submitted,

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